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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/768,462	01/25/2001	Noriyasu Suzuki	2018-380	3949

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Larry S. Nixon, Esq.  
NIXON & VANDERHYE P.C.  
1100 North Glebe Rd, 8th Floor  
Arlington, VA 22201-4714

EXAMINER

WOO, RICHARD SUKYOON

ART UNIT	PAPER NUMBER
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3629

DATE MAILED: 12/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/768,462

Applicant(s)

SUZUKI ET AL.

Examiner

Richard Woo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                                                                                 |                                                                                        |
|-------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                                                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                                            | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>01-25-2001</u> . | 6) <input type="checkbox"/> Other: ____                                                |

## **DETAILED ACTION**

### ***Priority***

- 1) Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Claim Rejections - 35 USC § 102***

- 2) The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

- 3) Claims 1-17 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 09-62729 (hereinafter JP).

As for Claim 1, JP discloses a method comprising steps of:

retrieving and displaying cost factor data of the product, which include cost factors and values of the cost factors, the cost factor data of the product including at least one of estimating a cost of a product, comprising geometrical data and attribute data of the product both contained in design data of the product produced by a CAD system, the geometrical data including at least one of dimensions, surface area and volume of the product, and the attribute data including at least product material name (see the entirety of the English Abstract and Figs. 1-24, especially Figs. 17, 23);

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acquiring at least one of the values of the cost factors by an automatic data acquisition feature of the CAD system through operation of the CAD system conducted by an operator (see *Id.*); and

computing cost of the product based on the cost factor data (see *Supra Abstract and Figs.*).

As for Claim 2, JP further discloses the method as claim wherein the acquiring step includes an input operation on a displayed three-dimensional CAD screen so that the at least one of the values of the cost factors is computed automatically and set in a corresponding displayed cost factor value input field (see the entirety of the English Abstract and Figs. 1-24, especially Figs. 17, 23).

As for Claim 3, JP further discloses the method as in claim 1, wherein the dimensions in the cost factors include width, length and height of the product; and the acquiring step automatically computes, when x, y and z axes of the product displayed on a three-dimensional CAD screen are changed, a value of the width, a value of the length and a value of the height of the product based on the changes and are renewed (see *Id.*).

As for Claim 4, JP further discloses the method as in claim 2, wherein the dimensions in the cost factors further include wall thickness of the product; and the acquiring step selects a couple of points on the product being displayed by a pointing device to set a value of the wall thickness of the product, and automatically computes the value of the wall thickness between the points and automatically sets the same in a displayed wall thickness value input field (see *Supra Abstract and Figs.*).

As for Claim 5, JP further discloses the method, wherein each manufacturing step of the product is predicted based on the cost factor data of the manufacturing step specified by the operator, a manufacturing step database and manufacturing step prediction rules; and the cost is computed based on the each predicted manufacturing step (see the entirety of the English Abstract and Figs. 1-24, especially Figs. 17, 23).

As for Claim 6, JP further discloses the method, wherein the cost factor data are retrievably stored in a storage device (see Id.).

As for Claim 7, JP discloses a cost estimation apparatus for estimating a cost of a product comprising:

storage device for storing geometrical data and attribute data of the product produced by a CAD system, the geometrical data including at least one of dimensions, surface area and volume of the product, and the attribute data including at least product material name (see the entirety of the English Abstract and Figs. 1-24, especially Figs. 17, 23);

a first acquisition device for automatically values of cost factors of the product from and the attribute data stored in the storage device (see Id.);

a second acquisition device for acquiring at least one of the values of the cost factors by an automatic data acquisition acquiring the geometrical data feature of the CAD system through operation of conducted by an operator (see Id.);

a cost computing device for computing the cost of the product based on cost factor data including the cost factors and the values of the cost factors acquired by the first and second acquisition devices; and

a display device for displaying the cost computed by the cost computing device (see Supra Abstract and Figs.).

As for Claim 8, JP further discloses the cost estimation apparatus, wherein the second acquisition device automatically computes and sets the at least one of the values of the cost factors in a corresponding displayed cost factor value input field, when an input operation on a displayed three-dimensional CAD screen is carried out (see the entirety of the English Abstract and Figs. 1-24, especially Figs. 17, 23).

As for Claim 9, JP further discloses the apparatus, wherein the dimensions include width, length and height of the product; and the second acquisition device automatically computes and renews a value of the width, a value of the length and a value of the height of the product based on changes, when x, and z axes of the product displayed on a three-dimensional CAD screen are changed by the operation of the CAD system by the operator (see Id.).

As for Claim 10, JP further discloses the apparatus, wherein the dimensions further include wall thickness of the product; and the second acquisition device automatically computes a value the wall thickness between couple of points and automatically sets the computed value of the wall thickness in a displayed wall thickness value input field, when the couple of points on the product being displayed are selected by a pointing

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device to set the value of the wall thickness of the product (see the entirety of the English Abstract and Figs. 1-24, especially Figs. 17, 23).

As for Claim 11, JP further discloses the apparatus including:

a cost factor specifying device for specifying the cost factor data of each manufacturing step based on an instruction of the operator; and

a manufacturing step prediction device for predicting each manufacturing step of the product based on the cost factor data of the manufacturing step specified by the cost factor specifying device, a manufacturing step database and manufacturing step prediction rules,

wherein the cost computing device computes the cost based on the each manufacturing step predicted step prediction device (see Id.).

As for Claim 12, JP further discloses the apparatus including: a storage device for retrievably storing the cost factor data (see Supra Figs. and Abstract).

As for Claim 13, JP discloses a cost estimation apparatus for estimating a cost of a product comprising a cost estimation application implemented in a CAD system for computing the cost based on design data of the product produced by the CAD system (see the entirety of the English Abstract and Figs. 1-24, especially Figs. 17, 23).

As for Claim 14, JP further discloses the apparatus, wherein the cost is estimated for the product that is currently displayed on the CAD system (see Id.).

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As for Claim 15, JP further discloses the apparatus as in claim including a server, which has a manufacturing step prediction feature for predicting each manufacturing step of the product and a cost computation feature for computing the cost of the product (see *Id.*).

As for Claim 16, JP discloses a cost estimation apparatus product comprising:

a CAD machine for designing the product, the CAD machine including a display device for displaying a design of the product and also design data of the product, an input device for inputting the design data and a central processing unit for processing the design data (see the entirety of the English Abstract and Figs. 1-24, especially Figs. 17, 23);

a design data server interconnected with the CAD machine and including a storage device for storing the design data and other data transmitted from the CAD machine, wherein the CAD machine is capable of retrieving the design data and other data from the storage device of the design data server (see *Id.*);

a cost estimation server for estimating a cost of the product, wherein the cost estimation server is interconnected with the CAD machine and includes a central processing unit for computing the cost of the product based on cost factor data of the product upon receiving an instruction from an operator of the CAD machine through the input device and also includes a storage device for storing the cost factor data and the computed cost of the product (see *Supra* Abstract and Figs.),



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wherein at least part of the cost of actor data of the product is automatically acquired based on the design data by the central processing unit of the cost estimation server (see Id.),

wherein the cost factor data of the product are concurrently renewed when corresponding input operation is performed on the displayed design of the product by the operator, and

wherein the computed cost of the product transmitted from the cost estimation server to the CAD machine and is displayed on the display device of the CAD machine (see Id.).

As for Claim 17, JP discloses a cost estimation apparatus for estimating a cost of a product comprising:

a CAD machine for designing the product, the CAD machine including a display device for displaying a design of the product and also design data of the product, an input device for inputting the design data, a central processing unit for processing the design data and a storage device for storing the design data (see the entirety of the English Abstract and Figs. 1-24, especially Figs. 17, 23); and

a cost estimation server for estimating a cost of the product, wherein the cost estimation server is interconnected with the CAD machine and includes a central processing unit for computing the cost of the product based on cost factor data of

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the product upon receiving an instruction from an operator of the CAD machine through the input device and also includes a storage device for storing the cost factor data and the computed cost of the product (see Id.),

wherein at least part of the cost factor data of the product is automatically acquired based on the design data by the central processing unit of the cost estimation server,

wherein the cost factor data of the product are concurrently renewed when corresponding input operation is performed on the displayed design of the product by the operator, and

wherein the computed cost of the product is transmitted from the cost estimation server to the CAD machine and displayed on the display device of the CAD machine (see Supra Abstract and Figs.).

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

JP 09-245071 is cited to show a 3D CAD system for component assembly with assembly cost estimation function.

US 5,847,971 is cited to show a furniture specification system having 3 basic components: 1) means for generating a furniture specification; 2) means for generating a visual display of the furniture products specified by the furniture specification on a

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display device; and 3) means for generating a cost specification based on the furniture specification.

US 2001/0016803 is cited to show a method and system for designing new parts of a design unit, in the context of a design-space environment made of already existing parts of the design unit, including at least one CAx system and at least one central database.

JP 2001-209669 is cited to show a housing design assistance device used in architectural and constructional design engineering, having server computer for designing house based on information received from the user.

US 2003-0128232 is cited to show a CAD system utilizing the network that does not need to prepare the graphic data beforehand and can provide the parametric graphic data that user expected promptly by simple order.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard Woo whose telephone number is 703-308-7830. The examiner can normally be reached on Monday-Friday from 8:30 AM -5:00 PM.

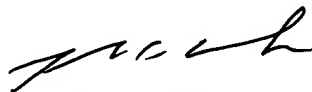
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Weiss can be reached on 703-308-2702. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Richard Woo  
Patent Examiner  
AU 3629  
December 06, 2004



JOHN G. WEISS  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3600